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Recently, the U.S. press reported that four major international oil corporations, led by the Houston-based giant Shell Oil Corporation, are drilling a prospective commercial well in the Gulf of Mexico at a depth of 7,625 feet.[1] This commercial project, known as the Baha Project, is situated in the submarine region of Alaminos Canyon, 200 miles southeast of Corpus Christi, Texas.[2]

Since this ambitious Baha Project was announced in February of 1996, it has attracted unprecedented attention in industrial, technological and diplomatic circles. This is the first time that four major oil companies joined their technological expertise in a venture to commercially exploit hydrocarbons and natural gas located in the deepest part of the Gulf of Mexico. The reason is simple. Described as "one of the foremost petroleum provinces of the world,"[3] the Gulf of Mexico basin continues to be a unique geological phenomenon.[4]

Technologically, this is the deepest oilfield in the world in the history of the oil industry. It consists of a submarine well to be drilled in water depths as great as 7,865 feet (2,394 meters), beyond the continental shelf's edge in the Gulf of

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This article is based on Professor Vargas' work *"Mexico's Legal Regime over Its Marine Spaces: A Proposal for the Delimitation of the Continental Shelf in the Deepest Part of the Gulf of Mexico,"* 26 INTER-AMERICAN L. REV. 2 (Winter 1994-95) at 189-242, and an essay on the same topic published in VOICES OF MEXICO. Nos. 36 and 37 (Fall-Winter 1996), CISAN, UNAM, Mexico City, at 76-80.

1. The four corporations are Shell Oil Co., Amoco, Inc., Texaco, Inc. and Mobil, Corp. *See* Nelson Antosh, *Shell, Partners to Reach New Low in Gulf Drilling,* HOUSTON CHRON., Mar. 12, 1996 at 1; Rick Hogan, *Four Major Team Up in Project to Drill Deepest Offshore Well,* OIL DAILY, Vol. 46, No. 47, Mar. 12, 1996 at 1; *see also* Agis Salpukas, *Four Oil Companies to Drill Well 7,625 Feet Under Gulf of Mexico,* N.Y. TIMES, Mar. 9, 1996 at 39.

2. Shell Offshore, a Shell affiliate based in New Orleans, is the operator of the Baha Project. The name is from the first letter of each company's lease in that area: Shell's Branchiosaurus, Amoco's Anaconda, Mobil's Hi-C and Texaco's Alpha Centauri. Each of the four companies holds a 25% stake. *See* Antosh, *supra* note 1, at 1.

3. *See* Richard Nehring, *Oil and Gas Resources, in* THE GEOLOGY OF NORTH AMERICA, VOL. J: THE GULF OF MEXICO BASIN 446 (Amos Salvador ed. 1991).

4. Since the first commercial exploitation for mineral resources took place in the Gulf of Mexico early this century, this marine basin has maintained its record as "one of the foremost petroleum provinces of the world." By the end of 1987 this basin had a "demonstrated ultimate known recovery" of 112.7 billion barrels of crude oil, 22.5 billion barrels of natural gas liquids (for a total of 135.2 billion barrels of petroleum liquids), and 534.8 trillion cubic feet of natural gas, for a total of 222.54 billion barrels of oil equivalent. *Id.*

Mexico. The existence of vast petroleum potential in the deep-water region of this basin, especially in the deep abyssal plain, where water depths reach a maximum of 12,270 feet (3,740 meters), has been known since 1979.[5] However, only recently has the oil industry developed the technology to attempt the commercial exploitation of these deep water sources of hydrocarbons.

From a diplomatic viewpoint, the drilling activities of the Baha Project constitute sources of grave concern to the government of Mexico.[6] Two delicate technical questions generate these concerns. First, the hydrocarbon deposit Shell Oil Corporation is targeting in the Alaminos Canyon is just a few miles away from the maritime boundary agreed to by the United States and Mexico in 1976.[7] The question here is whether the oil deposit in question extends beyond the international maritime boundary and physically penetrates into a submarine area under Mexico's sovereignty. In other terms, the hydrocarbons in the Alaminos Canyon may be a binational submarine area bisected by the international boundary between the two countries. The hydrocarbons may embrace a submarine area which is physically located under the control of both the United States and Mexico.

The second question may be more problematic. Scientific evidence suggests that the Alaminos Canyon deposit may be contiguous to a much larger source of hydrocarbons and natural gas located in the central and deepest part of the Gulf of Mexico. It has been estimated that in the "maritime boundary region of the Gulf of Mexico, the undiscovered in place resources range from 2.24 billion to 21.99 billion barrels of oil (BBO) and from 5.48 trillion to 44.40 trillion cubic feet (TCF) of gas."[8]

The U.S. Department of the Interior determined that "maritime boundary region" comprised approximately 58,940 square miles (152,660 square kilometers) and was divided into six individual assessment areas on the basis of its geologic characteristics.[9] (See Map No. 1, *infra* page 481). The Department's

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5. *Id.*

6. *See* Nick Anderson, *Mexico Fears U.S. Drillers will Siphon Off its Oil,* SAN DIEGO UNION TRIB. Mar. 31, 1996 at I-2.

7. *Exchange of Notes Effecting Agreement on the Provisional Maritime Boundary,* Nov. 24, 1976, U.S.-Mex., 29 U.S.T. 197 [hereinafter *Exchange of Notes*].

8. *See* GEOLOGICAL FRAMEWORK, PETROLEUM POTENTIAL, PETROLEUM-RESOURCE ESTIMATES, MINERAL AND GEOTHERMAL RESOURCES, GEOLOGIC HAZARDS, AND DEEP-WATER DRILLING TECHNOLOGY OF THE MARITIME BOUNDARY REGION IN THE GULF OF MEXICO. U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY (Open-File Report 81-265),1 (*Summary*) (Richard B. Powers, ed. 1981) [hereinafter GEOLOGICAL FRAMEWORK].

9. *Id.*

study "focused on factors critical to the generation, migration and entrapment of hydrocarbons, such as: structural and stratigraphic traps, source beds and thermal maturation, reservoir rocks and seals, and timing of hydrocarbon migration relative to formation of traps."[10] The problem is that this oil and gas deposit, described as the fourth largest in the globe, is situated in a submarine area whose boundaries were not established by the 1976 agreement.[11] To date, no bilateral agreement exists demarcating the submarine boundary of the continental shelf between the United States and Mexico.[12] Moreover, the countries have adopted a divergent position with regard to the submarine area extending beyond 200 nautical miles in the central part of the Gulf of Mexico.

The legal history of this case traces back to 1976, when both the United States and Mexico adopted a 200 nautical mile maritime zone offshore. During this time the international community witnessed the establishment of vast oceanic areas placed under the jurisdiction of the coastal state.[13] Also during this time, the Third U.N. Conference on the Law of the Sea (UNCLOS III) was engaged in the process of formulating a most comprehensive legal regime for the world's marine uses and resources, including the preservation and protection of the marine environment.[14]

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10. The oil and gas potential of the six assessment areas in the Maritime Boundary region of the Gulf of Mexico was analyzed by using "all publicly available geophysical data recorded in the region, supplemented by a limited amount of geological data obtained from drilling within and adjacent to the area of study." Geophysical data included "approximately 8,350 nautical miles (15,448 km) of seismic-reflection profiles ranging from shallow-penetration recordings to deep-penetration, common-depth-point (CDP) multichannel profiles." *Id.* at 3.

11. *See* GEOLOGICAL FRAMEWORK, *supra* note 8 and accompanying text.

12. *See Treaty on Maritime Boundaries, infra* note 20 and accompanying text.

13. The 200 n.m. marine resource area appeared originally in Latin America the "Patrimonial Sea." Eventually, UNCLOS III included this resource area under the title of exclusive economic zone (EEZ), which was the name given to this area by the African countries. *See* Francisco Orrego Vicuña, *La Zone Economique Exclusive: Régime et Nature Juridique dans le Droit International,* 37 RECUEIL DES COURS, 1986-IV. MARTINUS, THE HAGUE ACADEMY OF INTERNATIONAL LAWS 9-17 (1980).

14. *See* Bernard H. Oxman, *The Third United Nations Conference on the Law of the Sea: The Tenth Session* (1981), 76 AM. J. INT'L L.1, 1-23 (Jan. 1982); Bernard H. Oxman, *Introduction: On Evaluating the Draft Convention on the Law of the Sea. (Symposium: Law of the Sea XIV),*19 SAN DIEGO LAW REV. 453, 453-60 (Sum. 1982); John R. Stevenson & Bernard H. Oxman, *The Future of the United Nations Convention on The Law of The Sea,* 88 AM. J. IN'TL L. 488, 488-99 (July, 1994).

During the Carter administration, the United States created a 200 nautical mile Fishing and Conservation Zone.[15] Mexico, on the other hand, by amending Article 27 of its 1917 Constitution, during the administration of President Echeverría, established a 200 n.m. exclusive economic zone (EEZ)[16] The creation of these zones necessitated that both countries to engage in diplomatic negotiations to establish their respective maritime boundaries, especially in areas like the Gulf of Mexico where these oceanic zones overlapped.[17]

The United States and Mexico established these boundaries in the Gulf of Mexico and the Pacific Ocean through an Exchange of Notes in November 24 of 1976.[18] Two issues derive from the content of this agreement: First, said boundaries were considered to have a provisional character;[19] and second, this boundary did not apply to the continental shelf.

The same day the Exchange of Notes was entered into, Dr. Alfonso García Robles, then Mexican Secretary of Foreign Relations, sent the U.S. Ambassador a diplomatic note asserting:

> I take the liberty of pointing out that *our two countries have not yet delimited their respective continental shelves beyond twelve nautical miles seaward from the respective coasts*, and that the present arrangement with respect to maritime boundaries, based on the Treaty to Resolve Pending Boundary Differences and Maintain the Rio Grande and the Colorado River as the International Boundary, concluded in 1970, *only extends to the maritime boundary to 12 nautical miles.*[20]

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15. *See The Fishery Conservation and Management Act of 1976.* Pub. L. 94-265, 16 U.S.C. 1801, § 2 (1984). For a Mexican perspective of this zone, see Jorge A. Vargas, *MEXICO Y LA ZONA DE PESCA DE ESTADOS UNIDOS*, UNAM, México, 1979.

16. In symmetry with the substantive work of the Third United Nations Conference on the Law of the Sea (UNCLOS III) and in anticipation of its resulting 1982 Convention, Mexico was a pioneer in establishing a 200 n.m. EEZ. This was effected by a presidential decree that added a new Eighth paragraph to Art. 27 of the Constitution. *See Diario Oficial* (Feb. 6, 1976).

17. Mexico established the outer boundaries of its 200 n.m. EEZ by a presidential decree published in the *Diario Oficial* of June 7, 1976. *See* JORGE A. VARGAS, LA ZONA ECONOMICA EXCLUSIVA DE MEXICO (México 1980).

18. For an analysis of this agreement, see Jorge A. Vargas. *Mexico's Legal Regime Over Its Marine Spaces.* 26 INTER-AM. L. REV. 189, 219-36 (Winter 1994-95).

19. The title of this Exchange refers to the "Agreement on the *Provisional* Maritime Boundary." (emphasis added). *Id.*

20. *See Exchange of Notes, supra* note 7 at 199 (emphasis added). In response, U.S. Ambassador, Joseph John Jova agreed with the substance of Dr. García Robles' note, thus effecting the bilateral agreement.

This provisional character of the boundaries moved Mexico two years later to convince the U.S. government to conclude a more formal and permanent bilateral agreement on maritime delimitation. Thus, on May 4, 1978, during his visit to Mexico City, then Secretary of State, Cyrus Vance, signed a Treaty on Maritime Boundaries at Tlatelolco, the venue of Mexico's Secretariat of Foreign Affairs (SRE) on May 4, 1978.[21] (See Map No. 2, *infra* page 482). The boundaries in this treaty were identical to those in the Exchange of Notes of 1976.

Until now, no attempt has been made by the government of Mexico to explain its apparent necessity to formally elevate the Exchange of Notes into an agreement as solemn as a treaty. It is possible that Mexico may have been aware of the mineral riches in the Gulf of Mexico. In addition, considering that the 1976 boundaries were only provisional, it decided to sign a treaty believing the constitutional formalities inherent to this instrument[22] would impose on the United States a commitment more formal and serious than the one created by a mere Exchange Notes.[23]

Paradoxically, this attempt to establish by means of treaty Mexico's maritime boundaries between 12 and 200 nautical miles seaward led to the current predicament derived from the Baha Project in the Gulf of Mexico. The Mexican Senate approved the Treaty on Maritime Boundaries in a matter of days.[24] On the U.S. side, the treaty's constitutional process was rather disappointing for an expectant Mexico. The Committee on Foreign Relations reported favorably on the treaty in August of 1980; however, on September 16, 1980, the U.S. Senate indefinitely postponed consideration of the treaty when questions arose regarding the presence of rich hydrocarbon and natural gas deposits in the deepest portion of the Gulf of Mexico.[25] Since that hearing sixteen years ago, the treaty has not received the required advice and consent of the Senate to enter into force. As a consequence, this imperfect treaty continues to be in a state of legal limbo, collecting dust in the archives of the U.S. Senate.[26]

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21. *See* Treaty on Maritime Boundaries, May 4, 1978, 17 I.L.M. 1073, U.S.-Mex.

22. "Treaties" are distinguishable from any other international agreement since they are constitutionally required to obtain some type of approval from the Senate in order to be valid. *See* MEX. CONST. art. 76, para. I art. 2, § 2 U.S. Const.

23. *See* United States v. Belmont, 301 U.S. 324 (1937). The U.S. Supreme Court determined that independently of its name, *e.g.*, executive agreement, *compromise,* convention, *modus vivendi,* exchange of notes, etc., an "international compact" or executive agreement entered into by the United States (without having the advice and consent of the U.S. Senate) is the supreme law of the land and, as such, legally binding upon the U.S. government.

24. *See* DECRETO POR EL QUE SE APRUEBA EL TRATADO SOBRE LÍMITES MARÍTIMOS ENTRE MÉXICO Y LOS ESTADOS UNIDOS DE AMÉRICA, TOMO CCCLII, 15 DIARIO OFICIAL DE LA FEDERACION, Jan. 22, 1979 at 1.

25. *See* 126 CONG. REC. S12, 711 at 25,500 (1980).

26. *Id.*

Dr. Hollis D. Hedberg, a former executive of the Gulf Oil Corporation and emeritus professor of geology at Princeton University, first called attention to the geological data which indicated the presence of "some of the most promising, though very deep water, petroleum-prospective acreage off the U.S. coast anywhere, in an oceanic area located in the central portion of the Gulf of Mexico."[27]

As a result of this statement, which Dr. Hedberg made in 1980 when the U.S. Senate gave initial consideration to the 1978 Treaty,[28] the U.S. Senate requested the U.S. Geological Survey to conduct a technical assessment of the submarine area in question. This agency produced a report in 1981 which confirmed the existence of a deposit of hydrocarbons and natural gas in the deepest portion of the Gulf of Mexico.[29]

In late 1976, when Mexico and the United States established a 200 n.m. maritime zone along their respective coastlines, this demarcation left a small triangular area in the central part of the Gulf of Mexico located beyond the outer boundary. In other words, given the dimensions and physical configuration of this Gulf, a triangular submarine area located where the respective 200 nautical mile of each country do not overlap was left in the central part of that oceanic basin. This submarine triangle resulted because the opposite coasts of the U.S. and Mexico are more than 400 n.m. apart in that central location. Thus, the submarine area in question was formed by a 129 nautical mile segment in the north of the Gulf of Mexico as its base (closely following the 29 Parallel of latitude North) and the intersection of the two 200 n.m. arcs drawn from the baselines offshore Yucatán and Texas as its vortex, pointing to the south. The area of this triangle covers approximately 25,000 square miles.[30]

According to the 1982 United Nations Convention on the Law of the Sea, the waters in the triangular submarine area form a part of the high seas, which are "open to all States, whether coastal or land-locked," since they are located beyond the outer boundary of the 200 n.m.[31] The same convention provides that the

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27. *See* THREE TREATIES ESTABLISHING MARITIME BOUNDARIES BETWEEN THE UNITED STATES AND MEXICO, VENEZUELA AND CUBA: HEARINGS ON S. EXEC. REP. NO. 96-49 BEFORE THE COMMITTEE ON FOREIGN RELATIONS, 96th Cong., 2nd Sess., at 28-33, Hedberg Statement [hereinafter *Three Treaties*].

28. *Id.* at 30. *See also* H.D. Hedberg, *Evaluation of the U.S. - Draft Treaty on Boundaries in the Gulf of Mexico,* 14 MARINE TECH. SOC'Y J. 1, 32, 37 (1980).

29. *See* GEOLOGICAL FRAMEWORK, *supra* note 8.

30. *See Three Treaties, supra* 27 at 33.

31. *See* LAW OF THE SEA, OFFICIAL TEXT OF THE UNITED NATIONS CONVENTIONS ON THE LAW OF THE SEA WITH ANNEXES AND FINAL ACT, arts. 86, 87 (United Nations, N.Y. 1983) [hereinafter *LOS Convention*].

submarine area laying at the bottom of the triangle, that is., its seabed and the corresponding subsoil, form a part of the International Area, governed by Part XI of the Convention.[32] The International Area is that part of the seabed and ocean floor (including the subsoil thereof) located beyond 200 nautical miles and is under the authority and the exclusive jurisdiction of the International Sea-Bed Authority.[33]

The United States and Mexico have adopted conflicting legal interpretations regarding this "submarine triangle," where the U.S. Geological Survey confirmed the existence of vast mineral resources. For Mexico, this submarine area and its resources form a part of the International Area, constituting a portion of the "[c]ommon heritage of humankind."[34] This means, *inter alia,* that "no State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources, nor shall any State or natural or juridical person appropriate any part thereof;"[35] that "[a]ll rights in the resources of the Area are vested in mankind as a whole, on whose behalf the Authority shall act;"[36] and that "[n]o State or natural or juridical person shall claim, acquire or exercise rights in respect to the minerals recovered from the Area except in accordance with this Part [XI]. Otherwise, no such claim, acquisition or exercise of such rights shall be recognized."[37] All the activities taking place in the Area, including the exploration and exploitation of its resources, as well as marine scientific research,[38] are to be carried out "for the benefit of mankind as a whole,"[39] and strictly regulated by the International Authority.[40]

This language of the LOS Convention, as interpreted by Mexico, means that the United States, or any of its corporations or nationals, cannot explore nor exploit the mineral resources located within the triangle, nor conduct any marine scientific research activities in the submarine area.

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32. *Id.* art. 1, para. 1. LOS Convention defines "the Area" as "the seabed and ocean floor and subsoil thereof, *beyond the limits of national jurisdiction.*" (emphasis added).

33. *See id.* arts. 136, 156-158, United Nations. New York, 1983 at 2, 42 and 52-53.

34. *See LOS Convention* art. 136.

35. *Id.* art. 137, para. 1.

36. *Id.* art. 137, para. 2.

37. *Id.* art. 137, para. 3.

38. *Id.* art. 143.

39. *Id.* art. 140, para. 1.

40. *See id.* arts. 150-55, 156-69. The *International Seabed Authority* is formed *ipso facto* by all the States which became a party to the 1982 LOS Convention. Its seat is located in Kingston, Jamaica, and its principal function is to organize and control any activities affecting the resources of the Area—whether solid, liquid or gaseous, including polymetallic nodules—in conformity with Part XI of the 1982 LOS Convention. During the UNLOS III negotiations, the U.S. government strongly opposed Part XI because it disagreed with the principles and conditions governing the Area and the Authority.

The architect of Mexico's position was the Legal Advisor (*Consultor Jurídico*) of the Secretariat of Foreign Relations (SRE) during the administration of President Miguel de la Madrid.[41] However, as of this writing, the government of Mexico has not officially made public its legal position on this matter.

The United States, contrary to the Mexican thesis, has reiterated in numerous international *fora* that it does not accept Part XI of the LOS Convention, in particular the powers granted to the International Authority and the Enterprise.[42] It also rejects the notion that the Area, and its resources, form a part of the common heritage of humankind.[43] Basically, the United States position may be summarized by stating that the seabed and ocean floor, beyond the limits of national jurisdiction, is a submarine area subject to the same legal principles that apply to the high seas.[44] In the same fashion that anyone can fish in the high seas, for example, the United States considers that its corporations and its nationals have the right to explore and exploit the resources in that submarine area, as well as the right to conduct marine scientific research activities therein, since they are located beyond the limits of national jurisdiction. For the United States the International Authority has neither regulatory powers, nor any control over States, its corporations or its nationals, in the conduct of any activities in the so-called Area. The United States views extracting oil from the deep seabed as legally equivalent to catching fish from the high seas.

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41. This legal thesis was advanced by Dr. Alberto Székely Sánchez, *A Commentary with the Mexican View on the Problem of Maritime Boundaries in U.S.-Mexican Relations*, 22 NAT. RESOURCES J. 155 (1982).

42. *See id.* arts. 170, 153, para. 2(b). According to Part XI of the LOS Convention, the Enterprise is the organ of the Authority "which shall carry out activities in the Area directly, as well as the transporting, processing and marketing of minerals recovered from the Area." The Enterprise is to have "its principal place of business at the seat of the Authority." In addition to the Enterprise, "activities in the Area shall be carried out . . . in association with the Authority by State Parties, or state enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals, when sponsored by such States. . . ." *Id.*

43. John E. Noyes et al., *Deep Seabed Mining: The Work of the Preparatory Commission*, 82 AM. SOC'Y INT'L L. PROCED. 80 (April 20-23, 1988); Bernard Herbert Oxman, *The High Seas and the International Seabed Area*, 10 MICH. J. INT'L L. 526 (April 1989); George D. Hainbaugh Jr., *Regulation Symposium: Impact of the Reagan Administration of the Law of the Sea*, 46 WASH. & LEE L. REV. 151 (Winter 1989); American Society of International Law, *United Nations' Agreement Relating to the Implementation of Part XI of the United Nations Convent on the Law of the Sea of 10 December 1982*, 33 ILM 1309 (Sept. 1994); Louis B. Sohn, *Law of the Sea Forum: The 1994 Agreement on Implementation of the Seabed Provisions of the Convention on the Law of the Sea, International Law Implications of the 1994 Agreement*, 88 AM. J. INT'L L. 696 (Oct. 1994).

44. *Id. See LOS Convention* arts. 86-89, 90-120. The high seas is that part of the oceans placed beyond the limits of national jurisdiction, *i.e.* beyond 200 nautical miles, which is open to all States, whether coastal or land locked, and where the following six freedoms are exercised under the conditions established by the LOS Convention and other rules of international law: (1) of navigation, (2) overflight, (3) to lay submarine cables and pipelines, (4) to construct artificial islands, (5) of fishing, and (6) of scientific research.

This may be the legal position that Shell Oil Corporation and others will adopt if the oil deposit located in the submarine triangle of the Gulf of Mexico offers good commercial prospects. Legally, Shell is expected to strongly embrace the U.S. position. In this case, Shell would argue that it has the right to conduct exploratory and exploitation activities including commercial prospecting for oil and natural gas and conducting marine scientific research in a submarine area of the world's oceans, provided said area is located beyond the limits of national jurisdiction. This would include the submarine triangle in the central portion of the Gulf of Mexico.

Consequently, the Baha Project, whose objective is to drill a prospective commercial well in the Alaminos Canyon, may only be the first step in preparing for commercially exploiting the mineral resources found in the submarine triangular area. An area which, in accordance with Art. 76(1) of the LOS Convention may constitute a natural prolongation of the U.S. continental margin and whose outer edge is located beyond its 200 nautical mile EEZ, as this zone was established in 1983.[45] This is a venture that may become more commercially attractive if the technology now being tested in the Alaminos Canyon proves successful, and the mineral resources in the submarine triangle are quantitatively and qualitatively superior to those in the United States continental shelf.[46] Answering these crucial questions in the affirmative may move Shell Oil Corporation and others to initiate exploratory operations in the submarine triangle towards the early years of the next century. However, two key questions remain. First, did Mexico determine that the "submarine triangle" in the deepest portion of the Gulf of Mexico should be considered a part of the International Area? Secondly, is this really Mexico's official position?

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45. Proclamation by President Ronald Reagan, Washington, D.C., March 10, 1983. Proclamation No. 5030, 48 Fed. Reg. 10,605 (1983). Based on this proclamation the United States adopted a 200 nautical mile EEZ, asserting rights over living and non-renewable resources, and other actions, in accordance with the 1982 LOS Convention. Legally, the U.S. EEZ replaced the 200 n.m. Fishery Conservation and Management Zone (Pub. L. No. 94-265, 16 U.S.C., § 1801, (1976),established by President Carter in 1977.

46. *See* LOS Convention, *supra* note 31, art. 76 para. 1. (according to Art. 76, para. 1 of the 1982 LOS Convention, the continental shelf of a coastal state "comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea. . . ." The coastal state exercises over this submarine area "sovereign rights" for the purpose of exploring and exploiting its natural resources; *Id.* Art. 77, para. 1. These "natural resources consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species." *Id.* Art. 77, para. 4. However, these rights "do not affect the legal status of the superjacent waters or of the air space above those waters" and should not "infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States." *Id.* Art. 78, para. 1, 2.

Pursuant to the 1982 LOS Convention, if the "submarine triangle" is a part of the International Area neither Mexico, the United States, nor any other nation can conduct any exploratory or commercial activities in said triangle. Any exploratory or commercial operations in that triangle should be controlled and regulated by the International Authority, as mandated by Part XI of the Convention. Under this criterion, the submarine triangle located in the central portion of the Gulf of Mexico, geographically enclosed by the exclusive economic zones of the United States and Mexico, would then become a part of the "The Area," governed by "The Authority." However, the same Convention may offer a more practical alternative.

To solve this dilemma, special attention should be given to Art. 76 (1) of the LOS Convention which classifies the continental shelf into two different categories. The first kind, which may be described as "physical," and the second as "legal." This article provides:

> *[T]he continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond the territorial sea (A) throughout the natural prolongation of its land territory to the outer edge of the continental margin,* or (B) to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured *where the outer edge of the continental margin does not extend that distance.*[47]

This provision is of the utmost importance to any coastal State because its application determines whether a given State possesses a "legal continental shelf" of "only" 200 nautical miles, a fact applicable to 90% of all the coastal States at the global level, or whether its submarine shelf is a "physical continental shelf" a truly exceptional case in geological terms, whose outer boundary is located beyond 200 nautical miles. This is a pivotal determination that is bound to produce profound consequences for the State in question since it affects key areas of its economy, its industrial base in the oil and petrochemical sectors, its domestic and international trade, including its scientific and technological developments and, above all, the well-being of its population. An extended physical continental shelf rich in hydrocarbons and other mineral resources may be the clearest avenue to progress, education and political stability for any coastal State.

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47. *Id.* art. 76(1) (emphasis added).

Regarding the outer boundary of the continental shelf, Art. 76 (1) of the LOS Convention may be construed as allowing two different ways of delimiting said boundary: (1) when the physical continental shelf (including the continental margin) *extends beyond 200 nautical miles.;* and (2) when said continental shelf is rather narrow and does not extend beyond 200 n.m.

In the first case, the coastal State can establish the shelf's outer boundary to coincide with "the outer edge of the continental margin." From a geological viewpoint, this implies that the outer edge of the continental margin is physically found beyond the 200 nautical miles EEZ limit. Since this determination involves the presence of an exceptional submarine geological formation, that is, the natural prolongation of its land territory to the outer edge of the continental margin,[48] extending beyond the 200 nautical miles EEZ limit, the coastal State has the burden to provide "information on the limits of the continental shelf beyond 200 nautical miles"[49] to the Commission on the Limits of the Continental Shelf.

Until the late 1970's, very few coastal States reported having physical continental shelves extending beyond 100 or 150 nautical miles from shore, such as Australia, Argentina, Canada, India, Russia and the United States.[50] However, as a result of the impact produced by Art. 76 (1) of the LOS Convention, it is somewhat surprising to learn that today thirty coastal States—including Mexico—claim have a continental shelf (including the continental margin) extending beyond 200 nautical miles.[51]

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48. *Id.* art. 76, para. 3. For purposes of the Convention, "the *continental margin* comprises *the submerged prolongation of the land mass of the coastal state,* and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof." *Id.* (emphasis added).

49. *Id.* art. 2, Annex II. The Commission consists of 21 members who are "experts in the field of geology, geophysics or hydrogeography, elected by States Parties to this Convention from among their nationals, having due regard to the need to ensure equitable geographical representation, who shall serve in their personal capacities." *Id. See id.* art. 76, paras. 4-8 Annex II: *Commission on the Limits of the Continental Shelf.* LOS Convention Annex II: *Statement of Understanding Concerning a Specific Method to be Used in Establishing the Outer Edge of the Continental Margin, Final Act of the Third United Nations Conference on the Law of the Sea. Done at Montego Bay, December 10, 1982*; THE LAW OF THE SEA, *supra* note 31, art. 28, 111-113, 183-184.

50. *See* Laurent Lucchini and Michel Voelckel, LES ETATS ET LA MER, La Documentation Francaise, Paris, 1977; *see also* Tableau 3: *Superficies du Plateau Continental et de la Zone Economique* at 61-65.

51. These States are: Argentina, Australia, Bangladesh, Brazil, Canada, Cook Island, Dominican Republic, Guyana, Iceland, India, Japan, Ireland, Mauritania, Mauritius, Mexico, Mynamar, New Zealand, Pakistan, the Russian Federation, South Keits, Sain Lucia, Senegal, Seychelles, South Africa, Sri Lanka, United Arab Emirates, Uruguay, Vanuatu, Vietnam and Yemen (Information provided to the author by the Division for Ocean Affairs and the Law of the Sea Office of Legal Affairs, United Nations, New York).

In the second case, where the physical continental shelf is less than 200 miles, the LOS Convention allows the coastal State to "legally" extend the outer boundary of the shelf out to 200 nautical miles Thus, regardless of the physical dimensions of the continental shelf within the 200 nautical miles limit (including the margin), the Convention creates the legal fiction that the shelf extends out to 200 nautical miles, pursuant to the final part of Art. 76 (1). Incidentally, this produces the practical result of having the same 200 nautical mile outer limit for both the "legal continental shelf" and the EEZ.[52]

Generally speaking, the continental shelf is the submarine territory of the coastal State which is under its authority and control for purposes of exploring and exploiting the natural resources located therein. From a geological viewpoint, the continental shelves underlie only 7.5% of the total area of the oceans, but they are equal to eighteen percent of the earth's total land area.[53] On a global basis, the outer edge of the continental shelf ranges in depth from twenty to 550 meters, with an average of 133 meters; the shelf ranges in width from zero to 1,500 kilometers, with an average of seventy-eight kilometers (approximately fifty-five miles).[54]

When one applies these LOS Convention principles on how to delimit the continental shelf's outer boundary to the Gulf of Mexico—an oceanic basin traditionally known for its vast wealth in mineral resources[55]—it becomes evident the necessity of its basin States to agree on the delimitation of their respective marine spaces, notably the continental shelf. To date, there is no bilateral agreement between the United States and Mexico which establish those maritime boundaries. The ambiguity created by the lack of an agreement may evolve into more delicate and controversial questions in the near future if left untouched. This may be the case, for example, when one considers the presence of mineral resources located in the deepest part of the Gulf, beyond the 200 nautical mile

52. The Exclusive economic zone (EEZ) is an oceanic area beyond and adjacent to the territorial sea where the coastal State exercises exclusive jurisdiction and control over its natural resources, whether living and non-living, recognizing in favor of other States the freedoms of the high seas, except the freedom to fish. Art. 57 of the LOS Convention provides that the breadth of the EEZ "should not extend beyond 200 nautical miles." *See LOS Convention, supra* note 31, art. 57.

53. W.H. Freeman & Co. San Francisco, *The Continental Shelves,* THE OCEAN K.O. EMERY, 42, 42 (Scientific American, Inc. 1969). Scientifically, the continental shelf is defined "as the zone around a continent extending from the low-water line to the depth at which the ocean bottom slopes markedly downward. Conventionally, the edge of the shelf is taken to lie at 100 fathoms, or 200 meters, but a more accurate average for all continents is about 130 meters." *Id.* at 42-43.

54. *Id.* at 41.

55. *See supra* note 4 (explaining recovery efforts in the Gulf of Mexico and potential for extracting mineral resources).

exclusive economic zone limit. Another instance arises evaluating the legal consequences derived from a recent technical study suggesting that Mexico's natural prolongation of its submarine continental shelf may extend beyond 200 nautical miles.

What would happen if recent geological studies proved that the deepest part of the Gulf of Mexico is, indeed, a natural prolongation of Mexico's land territory to the outer edge of the continental margin,[56] as provided for by Art. 76 (1) of the LOS Convention?

Until now, the government of Mexico has maintained the official position that its continental shelf in the Gulf of Mexico is physically narrow, measuring much less than 200 nautical miles. Technical scientific studies, geological surveys and core samples conducted in the past have consistently proved that its continental shelf in the Gulf did not get close, let alone exceed the 200 nautical mile limit. This assertion can be substantiated by carefully examining any official charts of the Gulf of Mexico published by the government of Mexico, for example, when that country established its 200 nautical miles EEZ in 1976.[57] It can also be assumed that the uniformity and consistency of this traditional but technical information must have induced Mexico to be of the opinion that its physical continental shelf in the Gulf of Mexico was less than 200 nautical miles

Under this assumption, Mexico declared—through the Legal Counsellor of Foreign Affairs Secretariat (SRE)—that the triangular submarine area beyond the 200 nautical mile limit in the deepest part of the Gulf of Mexico was not a physical continental shelf but, rather, a submarine area which was a part of the "deep ocean floor,"[58] thus belonging to the International Area. In other words, this triangular submarine area was legally acknowledged to be *outside* that country's

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56. *See supra* 53 (explaining how Mexico has already claimed before the United Nations that its continental shelf (including the margin) extends beyond 200 nautical miles in the Gulf of Mexico); *see also infra* note 75 and accompanying text. The final determination on this claim is to be formally ascertained by the Commission on the Limits of the Continental Shelf, *see infra* note 75 and accompanying text.

57. *See* Jorge A. Vargas, *Mexico's Legal Regime over Its Marine Spaces,* 26 INTER-AM. L. R. 189, 206-215 (Winter 1994-95). By a Presidential Decree published in the *Diario Oficial* of February 6, 1976, Mexico established a 200 nautical miles Exclusive economic zone through an amendment to Art. 27 of its Constitution. The outer boundaries of Mexico's EEZ in the Pacific Ocean, the Gulf of Mexico and the Caribbean Sea were specified in detail, in coordinates of latitude and longitude, in the Decree published in the *Diario Oficial* on June 7, 1976, which entered into force on July 31, 1976. Jointly with this decree, Secretaría de Marina (Secretariat of the Navy) published a nautical chart depicting Mexico's EEZ and its outer boundaries, including the continental shelf.

58. In distinguishing between the "continental margin" and the "International Area," Art. 76 (3) of the LOS Convention clarifies that the continental margin "does not include the *deep ocean floor* with its oceanic ridges and the subsoil thereof." (Emphasis added).

national jurisdiction. Mexico likely took this option without realizing that its determination was technically unsound and scientifically unproven. However, when Mexico concluded that its physical continental shelf did not reach out to the 200 nautical miles limit some years back, this opinion simply confirmed the prevailing scientific opinion of the time, a technical opinion which had never been contradicted until now. Therefore, when this option was taken, in the 80's, there was no geological data proving that the prolongation of Mexico's land territory extended to the outer edge of the continental margin, as provided for by the LOS Convention.

However, to the surprise of the U.S. and Mexican scientific communities, recent seismic and geological studies conducted by the Department of Geology of the University of Texas at Austin have characterized the structure of the Gulf of Mexico basin as a "geological continuum" contained in a semienclosed area.[59] The uniqueness of the Gulf's geological structure may be supported by the confluence of several distinct features. First, there are a number of "naturally formed carbonate platforms, such as those offshore Campeche and Florida."[60] Second, the continental margins come from opposite sides of the basins and tend to meet and merge in the middle of the Gulf.[61] This is a very important scientific statement. In essence, it means that the submarine triangle is located precisely where the continental margins from the U.S. and Mexico merge in the middle of the basin. Third, the somewhat semicircular shape of this basin also contributes to its uniqueness. For millions of years, sediments have gradually covered the Gulf's submarine topography, from continental shelves and slopes to the abyssal points, and have concentrated in the deepest part of the Gulf due to the force of gravity.[62]

Based on these scientific studies published in 1991, Mexico appears to have evidence that the submarine triangle is not a part of the International Area.[63]

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59. *See* Richard T. Buffler, *Seismic Stratigraphy of the Deep Gulf of Mexico Basin and Adjacent Margins, in* THE GEOLOGY OF NORTH AMERICA VOL. J: THE GULF OF MEXICO BASIN 353 (Amos Salvador, ed., 1991).

60. *Id.* at 355.

61. *Id.* at 377.

62. *Id.* at 376.

63. *See generally id.* Although the study produced in 1991 by Dr. Buffler, *supra* note 59, from the Geology Department of the University of Texas at Austin, advanced an original and creative conclusion with respect to the natural prolongation of the continental shelf in the deepest portion of the Gulf of Mexico as a "geological continuum" formed by the Yucatan shelf, the Florida plain and the West Florida shelf, there is no doubt that further and more detailed geological studies will be necessary in the near future to reach a definite and final conclusion. Eventually, it is expected that any future studies and exploratory works in this area will be conducted not only by academic institutions but especially by private oil companies interested in the commercial exploitation of the resources located therein.

Allegedly, it should be geologically characterized as "a natural prolongation of its land territory to the outer edge of the continental margin," as provided by Art. 76 (1) of the LOS Convention. As a legal consequence of this determination, Mexico would have the right to exercise "sovereign rights for the purpose of exploring and exploiting the [mineral] resources" located in the submarine triangle, with the technical restrictions imposed by the Convention.[64] "From a part belonging to the International Area, the submarine triangle may now become a natural prolongation of Mexico's physical continental shelf, subject to that country's sovereign rights" for the purpose of exploring and exploiting the natural resources located therein.[65]

This change of policy by the Mexican government regarding the submarine triangle may hopefully produce considerable financial benefits for Mexico. Instead of generously yielding to the International Authority the vast mineral resources located in that submarine area, Mexico may be poised to assert its sovereign rights to exploit the mineral riches located therein for its own benefit.

Should Mexico officially adopt this policy, as appears to be the case based on its most recent claim before the United Nations, a number of legal consequences would arise, some affecting contiguous States—such as the United States and Cuba—and some touching upon the interests of third States. The most profound consequence for the United States would be quite unprecedented: the prospect of legally converting the Gulf of Mexico into a semienclosed ocean basin divided only between the United States and Mexico.

The legal rationale to reach this intriguing result would go like this: rather than characterizing the submarine triangle as a part of the International Area, which would automatically place it under the exclusive jurisdiction of The Authority in accordance with Part XI of the LOS Convention, Mexico should instead consider the submarine seabed and subsoil area of that triangle as forming a part of its continental shelf, pursuant to Art. 76 (1) of that Convention. Whereas past geological studies traditionally predicated that Mexico's shelf was rather narrow, recent scientific investigations by a leading U.S. scientific institution specializing in the geology of the Gulf of Mexico strongly suggest now that Mexico's continental shelf extends beyond the 200 nautical miles limit.

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64. Art. 82 of the LOS Convention provides, *inter alia,* that "[T]he coastal State shall make payments or contributions in kind in respect of the exploitation of the non-living resources of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured." *LOS Convention, supra* note 31, art. 82.

65. *Id.* art. 77 (1).

Accordingly, it was only logical for Mexico to define its continental shelf as the submarine area that extends throughout the natural prolongation of its land territory to the outer edge of the continental margin (which in this particular case is located beyond the 200 nautical miles limit), in strict conformity with said Art. 76(1). It seems that this was precisely the interpretation that motivated Mexico to file its claim before the United Nations.

Assuming that Mexico's continental shelf goes beyond the 200 nautical miles of its exclusive economic zone in the central portion of the Gulf of Mexico, they would then have to diplomatically engage the Untied States in order to negotiate a commonly agreed continental shelf boundary in that portion of the Gulf. As indicated earlier,[66] this submarine delimitation is the only one awaiting to be arranged between these two countries. Mexico's change of policy offers a unique opportunity to settle this question. To an extent, agreeing now on this submarine boundary would only make successful a task which was left unfinished in 1978 when the Treaty on Maritime Delimitation with Mexico was placed in legal limbo, and deliberately excluded from the 1976 Exchange of Notes.

It may not be difficult to anticipate how this final bilateral agreement on maritime delimitation between the U.S. and Mexico would look. From a technical viewpoint, the maritime boundary in question would highly resemble the already agreed upon, but incomplete, binational maritime boundary line as it stands today in the Gulf of Mexico. Probably, the major difference would be that the boundary line across the Gulf instead of being incomplete, since a portion of it is missing in its middle today, would be complete and uninterrupted.

It should be explained that when the Exchange of Notes was effected in 1976, Mexico expressly stated that the maritime boundary agreed then with the United States "did not apply to the continental shelf."[67] At that time, the principal interest of both nations was simply to establish the binational maritime boundary between their respective 200 nautical miles EEZ in the Pacific Ocean and the Gulf of Mexico. Negotiating an additional boundary as technical and complicated as the submarine area of the continental shelf in the central and deepest portion of the Gulf would have proven to be too formidable a task.

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66. *See supra* notes 19-27 and the accompanying text (regarding efforts between the U.S. and Mexico to delineate boundaries of the Continental Shelf).

67. For the text of the Mexican note signed by Dr. García Robles, Secretary of Foreign Affairs, see *supra* note 20.

Accordingly, the Exchange of Notes of 1976 (and later on the 1978 Treaty) established the boundary in the Gulf of Mexico as composed of two separate segments of geodetic lines: 1) an Eastern segment,[68] contiguous to the State of Texas in the United States and the State of Tamaulipas in Mexico; and 2) a Western segment,[69] close to Florida. These two segments, which were demarcated using points of coordinates of latitude and longitude, were separated by a gap situated in between them. This gap was indicative of the submarine area whose legal nature and outer boundary was agreed to be excluded from the negotiation. It may be added that this gap, which has a length of approximately 128 nautical miles, is the line that serves as the base of the submarine triangle in the central part of the Gulf.

The crux of the negotiation between the United States and Mexico in concluding an agreement which will finally complete all the boundaries which exist between them, consists in reaching an agreement on how to divide that submarine triangle in a fair and equitable manner between these two nations. A technical and legal matter of the utmost importance since reaching a successful outcome on this delicate question would automatically translate into dividing the Gulf of Mexico between both countries from a legal viewpoint.

What would be the legal consequences of this U.S.-Mexico final maritime delimitation agreement on Cuba? In 1976, the United States and Cuba already signed a Treaty establishing the outer maritime boundary of their respective 200 nautical miles EEZ.[70] The same year, Mexico and Cuba agreed also on the maritime boundaries of their 200 nautical mile EEZ, including the continental shelf.[71]

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68. The Eastern segment is formed by the following three geodetic lines:

GM.E-1	25 42	13.05	Lat. N.	91 05	24.89	Long. W.
GM.E-2	25 46	52.00	Lat. N	90 29	41.00	Long. W
GM.E-3	25 41	56.52	Lat. N	88 23	05.54	Long. W.

Exchange of Notes, art. 1, *supra* note 7.

69. The Western segment is formed by the following four geodetic lines:

GM.W-1	25 58	30.57	Lat. N	96 55	27 37	Long. W.
GM.W-2	26 00	31.00	Lat. N	96 48	29.00	Long. W.
GM.W-3	26 00	30.00	Lat. N.	95 39	26.00	Long. W.
GM.W-4	25 59	48 28	Lat. N.	93 26	42.19	Long. W.

Exchange of Notes, art. 1, *supra* note 7.

70. Maritime Boundary Agreement between the United States of America and the Republic of Cuba, signed at Washington, D.C. on December 16, 1997, and then extended on December 28-29, 1997 for a further two year period. *See Three Treaties*, *supra* note 27 at 12, 26-28.

71. *Canje de Notas que Delimitó la Zona Económica Exclusiva entre México y Cuba* (Exchange of Notes that Delimited the Exclusive Economic Zone between Mexico and Cuba), July 26, 1976. For the text of this agreement, see VARGAS. LA ZONA ECONOMICA EXCLUSIVA DE MEXICO, *supra* 17 at 75-76 (*Apéndice 7*).

Given the geographical configuration of this semienclosed ocean basin, and the legal effects produced as a result of this set of bilateral agreements, the way is clear for dividing the Gulf of Mexico between the United States and Mexico. Successfully concluding the suggested maritime agreement between these two nations would convert the Gulf into a virtual binational lake.

However, should Mexico adhere to this attractive legal option, a lot of technical, legal and diplomatic work must be done. Above all, that country will have to produce solid and incontrovertible evidence that "the natural prolongation of its land territory to the outer edge of the continental shelf" actually goes beyond 200 nautical miles, in the central part of the Gulf of Mexico.[72] Once this comprehensive and financially costly package of technical information is completed, Mexico will then have to submit it to the Commission on the Limits of the Continental Shelf, in order to obtain the Commission's final and binding recommendations on matters related to the establishment of the outer limits of its continental shelf.[73] Armed with this Commission's favorable recommendation,[74] Mexico would then have to proceed to demarcate its continental shelf outer boundaries in the deepest part of the Gulf of Mexico, beyond 200 nautical miles, in that intriguing submarine triangle area. As suggested earlier, for the demarcation of this boundary, Mexico is to enter into formal negotiations with the United States in order to produce a mutually agreeable result. A demarcation which will have to be followed by its graphic depiction in the corresponding cartographic maps and nautical charts, including the pertinent geodetic data, to be published and disseminated at the domestic and international levels.[75]

From an academic perspective, the Baha Project may suggest a number of specific reflections. Some of them include:

1. Mexico and the United States should finally complete the establishment of all their boundaries, both land and maritime—an effort

72. *See LOS Convention supra* note 31, art. 76, para. 1.

73. *Id.*, art. 76, paras. 4-8.

74. The Commission on the Limits of the Continental Shelf is expected to be formed by March of 1997 when its 21 members will be elected. States who are parties to the LOS Convention are currently submitting names of candidates to the United Nations.

75. In addition to enacting domestic legislation establishing the outer boundaries of its continental shelves in the Gulf of Mexico, the Pacific Ocean, and the Caribbean Sea, Mexico would have to deposit with the Secretary General of the United Nations "charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf." The U.N. Secretary General is required to give "due publicity" to these charts and information. *See LOS Convention, supra* note 31, art. 76, para. 9.

which was initiated as a result of the Guadalupe Hidalgo Treaty of 1848 and the Gadsden Purchase of 1853. Today, the only boundary yet to be agreed upon is the continental shelf boundary in the Pacific Ocean and especially in the Gulf of Mexico.

2. Mexico may consider making its position regarding the submarine triangle official. In light of the results the Baha Project expects to accomplish in the near future, Mexico may revisit the legal and technical complexities associated with the existence of mineral resources in the central part of the Gulf of Mexico, and the benefits that the eventual exploitation of these resources may produce for the present and future generations of Mexicans.
3. The recent filing of Mexico's claim before the United Nations alleging that its continental shelf in the Gulf of Mexico goes beyond 200 nautical miles, suggests a drastic change of policy on this issue. Should this be the case, this would lead Mexico and the United States to engage in diplomatic negotiations to finally agree on the maritime boundary of their respective continental shelves in that Gulf in the immediate future. The signing of an eventual agreement on this delicate question would put an end to any concerns associated with the derailed Treaty on Maritime Delimitation of 1978.
4. The successful conclusion of such an eventual maritime agreement would automatically lead both countries to consider the Gulf of Mexico as a virtual binational lake, to be shared principally by the United States and Mexico. However, in this eventuality, any rights or interests of third States in said Gulf would have to be identified, negotiated, recognized and duly clarified.
5. Unlike Mexico, who is a party to the LOS Convention,[76] the United States "decided not to sign the Convention in 1982 because of flaws in the regime it would have established for managing the develop-

76. Mexico signed both the Final Act of UNCLOS III and the LOS Convention at Kingston, Jamaica, on December 10, 1982. Mexico adhered to the Convention on March 18, 1983 and, after the Senate's approval, promulgated the Convention in the *Diario Oficial de la Federación* of June 1, 1983. *See* MEXICO: RELACION DE TRATADOS EN VIGOR (1993). Secretaría de Relaciones Exteriores, Tlatelolco, México, D.F., 1993 at 186.

ment of mineral resources of the seabed beyond national jurisdiction (Part XI)."[77] However, on July 29, 1994, the United States signed an agreement which fundamentally changes the deep seabed mining regime of the Convention in close symmetry with the proposals advanced by the United States[78] As a consequence, it is highly likely that the United States will soon become a party to the LOS Convention.[79] If both the United States and Mexico are parties to this Convention, this would facilitate the reaching of mutually agreeable solutions regarding the uses and resources of the oceans, including the conduct of marine scientific research activities.[80]

6. It may also be in Mexico's interest to enter into an agreement with the United States regarding the legal régime to apply to shared natural resources bisected by the international boundary between both countries. The signing of this agreement may receive special attention when it is considered that such resources consist of valuable oil and gas deposits or underground aquifers along the U.S.-Mexico boundary, whether located in the ocean or upon the land mass.
7. Given the inherent risks associated with the exploration and exploitation of deposits of natural resources in deepsea areas, such as the Baha Project, it becomes urgent for Mexico and the United

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77. *Text of a Letter from the President of the United States of America to the U.S. Senate, October 7, 1994.* U.S. DEPT. OF STATE DISPATCH SUPP. Feb. 1995, Vol. 6, No. .1, *reproduced at* 34 I.L.M.1396 (Sept. 1995).

78. The Agreement "meets the objections the United States and other industrialized nations previously expressed to Part XI. It promises to provide a stable and internationally recognized framework for mining to proceed in response to future demand for minerals." *Id.*

79. Annick de Marffy-Mantuano, *The Procedural Framework of the Agreement Implementing the 1982 U.N. Convention on the Law of the Sea,* 89 AM. J. INT'L L. (Oct. 1995) at 814-824. Agreement of July 29, 1994, see 34 I.L.M. 1393 (1995).

80. Jorge A. Vargas, *U.S. Marine Scientific Research Activities Offshore Mexico: An Evaluation of Mexico's Recent Regulatory Legal Framework,* 24 DENVER J. INT'L L. & POL'Y 1 (Fall 1995).

States to evaluate the adequacy of the bilateral agreement of cooperation regarding marine pollution by discharges of hydrocarbons and other hazardous substances,[81] entered into as a consequence of the serious environmental damage caused by the Ixtoc catastrophe some years ago.[82] Neither country can afford another similar environmental disaster.[83]

CONCLUSION

The Baha Project in the Gulf of Mexico may be an example on how certain leading scientific and technological developments produce a direct impact upon the creation of legal norms, principles and institutions.

This close interaction between science and technology, on the one hand, and the law, on the other, cannot be more evident than when it relates to the uses and resources located in the hydrosphere. Thus, the progress science and technology has given humankind, as one approaches the end of this century, will no doubt bring a plethora of more formidable challenges when one envisions the beginnings of the new millennium. Deepsea drilling for oil and natural gas; exploratory activities, prospecting and commercial exploitation of polymetallic nodules in submarine areas within the coastal state's exclusive economic zones, including the seabed and ocean floor beyond the limits of national jurisdiction; generation of electricity by marine-propelled forces, whether consisting of air, currents or waves; and even the coastal emplacement of submarine habitats, where scientists, environmentalists or miners will use them to work, are well-known examples of new technological vistas that are bound to create new laws.

Notwithstanding these somewhat fantastic projections, the Baha Project may have played a decisive role in the development of one of the most unprecedented legal notions in the history of the United States and Mexico: the division of the Gulf of Mexico between these two nations.

The recent filing by the government of Mexico before the United Nations claiming that its continental shelf in the Gulf of Mexico exceeds the 200 nautical mile limit, opens a unique opportunity for the United States not only to support

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81. Agreement of Cooperation regarding Pollution of the Marine Environment by Discharges of Hydrocarbons and Other Hazardous Substances, with Annexes, July 24, 1980, U.S. - Mex. 32 U.S.T. 5899.

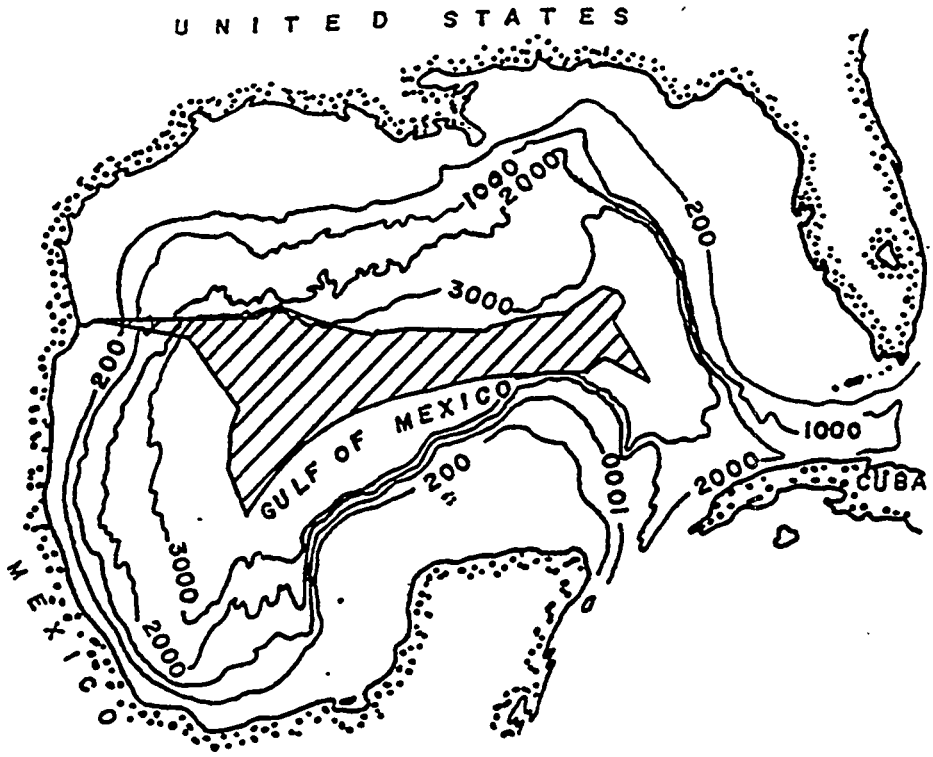
82. The "Ixtoc I" was one of 158 exploratory wells drilled by PEMEX on the continental shelf off the coast of Campeche, 58 miles northwest of Ciudad del Carmen, in the Gulf of Mexico.The well blew after several months of drilling, on June 3, 1979, spilling million of barrels of crude oil for the next ten months in that ocean basin. Given the marine currents in that area, the oil invaded Texas and Louisiana, causing severe damage to the hotel and shrimp industries in those States. *The Capping of Ixtoc.* R&D MEXICO 16 (Oct. 1980).

83. James M. West, *The Ixtoc 1 Oil Spill Litigation: Jurisdictional Disputes at the Threshold of Transnational Pollution Responsibility,* 16 TEX. INT'L L. J., 475, 475-532, (Summer 1981); *see also* William J. McDonald, *Ixtoc I: International and Domestic Remedies for Transboundary Pollution Injur,*. 49 FORDHAM L. REV. 404-31 (Dec. 1980)

Mexico's claim but to technically assist this country in proving that geological assertion to the Commission on the Limits of the Continental Shelf. Mexico's drastic change of policy, abandoning the idea that the submarine area in the central portion of that Gulf, beyond the 200 nautical miles limit, should be considered a part of The Area, places Mexico's policy closer to the U.S. official policy. Thus, both countries should consider entering into negotiations to define the legal status of the submarine triangle and proceed, as soon as practicable, to establish the binational boundary of the outer limits of the continental shelf in the deepest part of the Gulf of Mexico.

Reaching an agreement on this submarine maritime boundary would automatically lead both countries to convert the Gulf of Mexico into a virtual U.S.-Mexico binational lake.

Map 1


UNITED STATES
1000
2000
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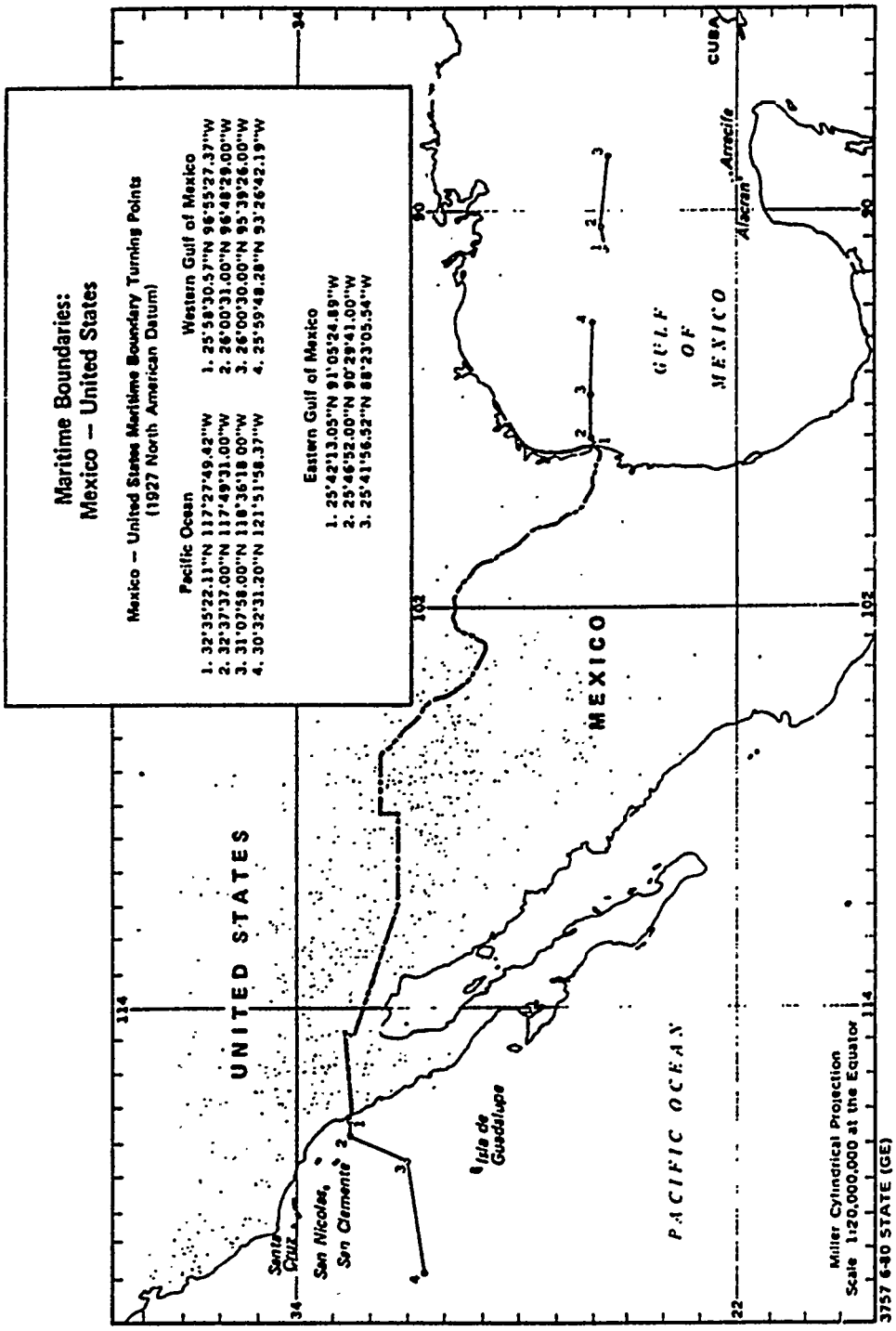
3000
200
GULF OF MEXICO
200
1000
2000
CUBA
3000
2000
MEXICO

Map 2


Maritime Boundaries:
Mexico — United States
Mexico — United States Maritime Boundary Turning Points
(1927 North American Datum)
Pacific Ocean
1. 32°35'22.11"N 117°27'49.42"W
2. 32°37'37.00"N 117°49'31.00"W
3. 31°07'58.00"N 118°36'18.00"W
4. 30°32'31.20"N 121°51'58.37"W
Western Gulf of Mexico
1. 25°58'30.57"N 96°55'27.37"W
2. 26°00'31.00"N 96°48'28.00"W
3. 26°00'30.00"N 95°39'26.00"W
4. 25°59'48.28"N 93°26'42.19"W
Eastern Gulf of Mexico
1. 25°42'13.05"N 91°05'24.89"W
2. 25°46'52.00"N 90°29'41.00"W
3. 25°41'56.52"N 88°23'05.54"W
UNITED STATES
MEXICO
CUBA
GULF OF MEXICO
PACIFIC OCEAN
Santa Cruz
San Nicolas
San Clemente
Isla de Guadalupe
Alacran
Arcas
Miller Cylindrical Projection
Scale 1:20,000,000 at the Equator
3757 6-80 STATE (GE)